



Division of The BOC Group, Inc.

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MATERIAL SAFETY DATA SHEET

PORSE
11.3.125/11
11/01/86

Welding Consumables
and Related Products
Conforms to OSHA 1910.1200

IDENTIFICATION

PRODUCT NAME: Argoshield Gas #8C, #25C

CHEMICAL FAMILY: Gas Mixture

SYNONYMS: Argon in CO₂ Mixtures

DOT HAZARD CLASS: Nonflammable
gas

CAS NUMBER: Argon: 7440-37-1
Carbon Dioxide: 124-38-9

DOT IDENTIFICATION NUMBER: UN 1956

FORMULA: Ar: 15-75%
CO₂: 25-85%

CHEMTREC: 800-424-9300

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT:

No TWA/PEL established for mixture. Carbon dioxide has a TWA of 5,000 molar PPM. Its STEL is proposed to be changed from 15,000 molar PPM to 30,000 molar PPM (ACGIH, 1985-86). OSHA (1985) TWA for carbon dioxide = 5,000 molar PPM.

SYMPTOMS OF EXPOSURE:

Concentrations of 20-30 percent of these mixtures when inhaled with adequate oxygen in the air will cause an increase in the respiratory rate. Higher concentrations will cause headache, nausea and eventual unconsciousness.

TOXICOLOGICAL PROPERTIES:

Carbon dioxide is the most powerful vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Chronic harmful effects are not known from repeated inhalation of low (20-30%) concentrations of these mixtures.

RECOMMENDED FIRST AID TREATMENT:

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO THESE MIXTURES. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

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Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given mouth-to-mouth resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

Hazardous Mixtures of Other Liquids, Solids, or Gases:

None

PHYSICAL DATA

Boiling Point: N/A, Gas Mixture

Liquid Density @ Boiling Point: N/A, Gas Mixture

Vapor Pressure @ 70°F (21.1°C): N/A, Gas Mixture

Specific Gravity @ 70°F, 1 atm (Air=1): 1.40

Solubility in Water: Slightly

Freezing Point: N/A, Gas Mixture

Appearance and Odor: Colorless, and odorless gas.

FIRE/EXPLOSION HAZARDS DATA

Flash Point (Method Used): N/A

Auto Ignition Temperature: N/A

LEL: N/A

UEL: N/A

Extinguishing Media: Nonflammable, inert gas

Electrical Classification: Nonhazardous

Special Fire Fighting Procedures: N/A

Unusual Fire and Explosion Hazards: N/A

REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to Avoid): None

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: None

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in container or container valve, contact CHEMTREC for emergency assistance or your closest Airco location.

Waste Disposal Method:

Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, and valve protection cap in place to Airco for proper disposal.

SPECIAL PROTECTION INFORMATION

Respiratory Protection: Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.

Ventilation: See Local Exhaust

Local Exhaust: To prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 18 molar percent, and prevent accumulation above TWA for carbon dioxide.

Special: None

Mechanical (Gen.): None

Other: None

Protective Gloves: Any material

Eye Protection: Safety goggles or glasses

Other Protective Equipment: Safety shoes

SPECIAL PRECAUTIONS

Special Labeling Information:

DOT Shipping Name: Compressed Gas, N.O.S.

DOT Hazard Class: Nonflammable gas

DOT Shipping Label: Nonflammable gas

I.D. No.: UN 1956

Special Handling Recommendations:

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to low pressure (< 3,000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate or product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

For additional storage recommendations, consult Compressed Gas Association Pamphlets P-1.

Special Storage Recommendations:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time.

For additional storage recommendations, consult Compressed Gas Association Pamphlets P-1.

Special Packaging Recommendations:

These mixtures are noncorrosive and may be used with any common structural material.

Other Recommendations or Precautions:

Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR). Also see CGA Safety Bulletin SB-7.